

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method for cleaning a membrane filtration module, the module comprising at least one membrane located in a feed-containing vessel, the membrane comprising a permeable wall, the method comprising:

[[a]]] conducting a filtration operation wherein a feed containing a contaminant is applied to a first side of the permeable wall and a filtrate is withdrawn from a second side of the permeable wall;

[[b]]] suspending the filtration operation;

[[c]]] performing a cleaning process on the permeable wall to dislodge a contaminant therefrom into a liquid surrounding the membrane;

forming a gas-containing region on the first side of the permeable wall;

sealing the feed-containing vessel;

pressurizing a gas within the gas-containing region; and

opening the feed-containing vessel to atmosphere, whereby the gas-containing region expands and produces a sweep of the feed-containing vessel

d) performing a high velocity sweep of the feed-containing vessel to remove the liquid containing the dislodged contaminant; and

e) recommencing the filtration operation.

2. (Currently amended) The method according to claim 1, wherein the step e) of performing a cleaning process comprises performing a fluid backwash of the permeable wall to dislodge a contaminant therefrom into a liquid surrounding the membrane.

3. (Original) The method according to claim 2, wherein the fluid backwash comprises a liquid backwash.

4. (Original) The method according to claim 2, wherein the fluid backwash comprises a gas backwash.

5. (Currently amended) The method according to claim 1, wherein a velocity of the ~~high velocity~~ sweep is greater than about 0.03 m/sec.

6. (Currently amended) The method according to claim 1, wherein a velocity of the ~~high velocity~~ sweep is from about 0.3 m/sec to about 2.0 m/sec.

7. (Currently amended) The method according to claim 1, wherein the step e) of performing a cleaning process comprises gas scrubbing a surface of the permeable wall.

8. (Currently amended) The method according to claim 1, wherein the ~~high velocity~~ sweep of the feed-containing vessel is performed produced periodically in different directions within the vessel.

9. (Original) The method according to claim 1, wherein the membrane comprises a hollow fiber membrane, and wherein the filtrate is withdrawn from at least one end of the hollow fiber membrane during the filtration operation.

10. (Currently amended) The method according to claim 1, wherein step d) comprises:

f) forming a the gas-containing region is formed within the feed-containing vessel[[;]]
g) sealing the feed-containing vessel;
h) applying a pressure to a gas within the gas containing region to pressurize the gas; and
i) releasing the pressure by opening the feed-containing vessel to atmosphere, whereby the pressurized gas expands and produces a ~~high velocity sweep of the feed-containing vessel~~.

11. (Currently amended) The method according to claim 1, wherein step d) comprises:

f) ~~providing a the gas-containing region is formed~~ within a further vessel coupled to the feed-containing vessel; ~~and wherein the step of sealing the feed-containing vessel comprises~~

[~~g~~]] sealing the feed-containing vessel and the further vessel as a whole[[:]]

h) ~~applying a pressure to a gas within the gas-containing region to pressurize the gas; and~~

i) ~~releasing the pressure by opening the feed-containing vessel to atmosphere, whereby the pressurized gas expands and produces a high velocity sweep of the feed-containing vessel.~~

12. (Original) The method according to claim 10, wherein the gas-containing region is formed by partially draining down a feed liquid within the feed-containing vessel.

13. (Currently amended) The method according to claim 10, wherein ~~step i) opening the feed-containing vessel~~ comprises applying a fluid backwash to the membrane.

14-24. (Canceled)

25. (New) The method according to claim 1, wherein the feed-containing vessel is opened to atmosphere when a pressure on the first side of the membrane approaches a pressure on the second side of the membrane to generate an instantaneous negative transmembrane pressure.